

WHAT IS CLAIMED IS:

1. A method of screening for biologically active agents that modulate a cancer associated protein kinase function, the method comprising: combining a candidate biologically active agent with any one of:

- (a) a polypeptide encoded by SEQ ID NO:1;
- (b) a cell comprising a nucleic acid encoding a polypeptide encoded by SEQ ID NO:1;

or

(c) a non-human transgenic animal model for cancer associated kinase gene function comprising one of: (i) a knockout of a gene corresponding SEQ ID NO:1; (ii) an exogenous and stably transmitted mammalian gene sequence comprising polypeptide encoded by SEQ ID NO:1; and

determining the effect of said agent on kinase function.

2. A method for the diagnosis of cancer, the method comprising:

determining the upregulation of expression of SEQ ID NO:1 in said cancer.

3. The method of Claim 2, wherein said cancer is a liver cancer.

4. The method of Claim 2, wherein said cancer is a colon cancer.

5. The method of Claim 2, wherein said determining comprises detecting the presence of increased amounts of mRNA in said cancer.

6. The method of Claim 2, wherein said determining comprises detecting the presence of increased amounts of protein in said cancer.

7. A method for inhibiting the growth of a cancer cell, the method comprising downregulating activity of the polypeptide encoded by SEQ ID NO:1; in said cancer cell.

8. The method according to Claim 7, wherein said method comprises introducing antisense sequences specific for SEQ ID NO:1.

9. The method according to Claim 7, wherein said method comprises introducing an inhibitor of kinase activity into said cancer cell.

10. The method according to Claim 7, wherein said cancer cell is a liver cancer cell.

11. The method according to Claim 7, wherein said cancer cell is a colon cancer cell.

12. A method of screening for targets of a cancer associated protein kinase, wherein said targets are associated with signal transduction in cancer cells, the method comprising:

comparing the pattern of gene expression in a normal cell, and in a tumor cell characterized by up-regulation of SEQ ID NO:1.

13. The method according to Claim 12, wherein said comparing the pattern of gene expression comprises quantitating specific mRNAs by hybridization to an array of polynucleotide probes.

14. A method of screening for targets of a cancer associated protein kinase, wherein said targets are associated with signal transduction in cancer cells, the method comprising:

comparing the pattern of protein phosphorylation in a normal cell, and in a tumor cell characterized by up-regulation of SEQ ID NO:1.

15. The method according to claim 12, wherein said signal transduction involves activation by protein dependent kinase 1.

16. The method according to Claim 14, wherein said signal transduction involves activation by protein dependent kinase 1.

17. An isolated nucleic acid comprising the sequence set forth in SEQ ID NO:1.